AMENDMENTS TO THE CLAIMS

1. (Original) A solid-state image pickup apparatus comprising:

a plurality of photo-sensors arranged in a direction of row and a direction of column, each of said plurality of photo-sensors corresponding to a particular pixel included in an imaging frame, each of said plurality of photo-sensors comprising a first photosensitive cell having first sensitivity for photoelectrically transducing incident light to generate a signal charge and a second photosensitive cell having second sensitivity lower than the first sensitivity for photoelectrically transducing incident light to generate a signal charge; and

a corrector executing shading correction on a first image signal derived from said first photosensitive cell in accordance with a shading characteristic of said first photosensitive cell, and on a second image signal derived from said second photosensitive cell in accordance with a shading characteristic of said second photosensitive cell.

2. (Original) The apparatus in accordance with claim 1, wherein said corrector corrects the first image signal with first shading correction data assigned to said first photosensitive cell and the second image signal with second shading correction data assigned to said second photosensitive cell.

3. (Original) The apparatus in accordance with claim 1, wherein each of said plurality of photo-sensors is arranged at a fixed pitch in the direction of row and the direction of column in a substantially square matrix.

4. (Original) The apparatus in accordance with claim 2, wherein each of said plurality of photo-sensors is arranged at a fixed pitch in the direction of row and the direction of column in a substantially square matrix.

5. (Original) The apparatus in accordance with claim 1, wherein each of said plurality of photo-sensors is shifted from adjoining one of said plurality of photo-sensors by a distance substantially corresponding to a single photo-sensor in the direction of row and the direction of column.

6. (Original) The apparatus in accordance with claim 2, wherein each of said plurality of photo-sensors is shifted from adjoining one of said plurality of photo-sensors by a distance substantially corresponding to a single photo-sensor in the direction of row and the direction of column.

7. (Currently amended) A solid-state image pickup apparatus comprising:~~The apparatus in accordance with claim 1~~

a plurality of photo-sensors arranged in a direction of row and a direction of column, each of said plurality of photo-sensors corresponding to a particular pixel included in an imaging frame, each of said plurality of photo-sensors comprising a first photosensitive cell having first sensitivity for photoelectrically transducing incident light to generate a signal charge and a second photosensitive cell having second sensitivity lower than the first sensitivity for photoelectrically transducing incident light to generate a signal charge; and

a corrector executing shading correction on a first image signal derived from said first photosensitive cell and on a second image signal derived from said second photosensitive cell;[[,]]

~~wherein each of~~ said plurality of photo-sensors each being ~~are~~ shifted from adjoining ~~one of said plurality of~~ photo-sensor[[s]] by a distance ~~substantially~~ corresponding to a single photo-sensor in the direction of row and the direction of column[[,]];

said first photosensitive cell and said second photosensitive cell of each of said plurality of photo-sensors being positioned closer to a center and an edge of the imaging frame, respectively, and;

said corrector correcting the ~~fist~~ first image signal and the second image signal in accordance with a shading characteristic common to said first photosensitive cell and said second photosensitive cell.

8. (Original) The apparatus in accordance with claim 5, wherein said corrector uses third shading correction data for both of said first photosensitive cell and said second photosensitive cell.

9. (Original) The apparatus in accordance with claim 5, further comprising a mixer mixing the first image signal with the second image signal to produce a third image signal, wherein said corrector corrects the third image signal in accordance with a shading characteristic common to said first photosensitive cell and said second photosensitive cell.

10. (Original) The apparatus in accordance with claim 6, further comprising a mixer mixing the first image signal with the second image signal to produce a third image signal, wherein said corrector corrects the third image signal in accordance with a shading characteristic common to said first photosensitive cell and said second photosensitive cell.

11. (Previously Presented) The solid-state image pickup apparatus of claim 1 wherein said first photosensitive cell has a first photosensitive area and the second photosensitive cell has a second photosensitive area smaller than the said first photosensitive area;

wherein the shading characteristic of said first photosensitive cell used by said corrector relates to said first photosensitive area and the shading characteristic of said second photosensitive cell used by said corrector relates to said second photosensitive area.